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1 CLAIMS

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3 1. A method comprising:

4 receiving an indication of an application programming interface definition

5 that is written in a markup language; and

6 transforming the interface definition into a non-markup language source

7 file.

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9 2. A method as recited in claim 1, wherein the source file comprises a

10 component object model (COM) header file.

11

12 3. A method as recited in claim 1, wherein the source file comprises

13 code mapping a set of enumeration values to corresponding string values.

14

15 4. A method as recited in claim 1, further comprising transforming the

16 application programming interface definition into a documentation file that

17 describes the contents of the non-markup language source file.

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19 5. A method as recited in claim 1, wherein the source file comprises a

20 proxy object code file.

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1 6. A method as recited in claim 1, further comprising transforming the
2 application programming interface definition into a test proxy object code file,
3 wherein the test proxy object code file includes a plurality of test proxies to assist
4 in testing the non-markup language source file.

5
6 7. A method as recited in claim 1, wherein receiving the indication
7 comprises receiving a filename of the application programming interface
8 definition.

9
10 8. A method as recited in claim 1, wherein receiving the indication
11 comprises receiving the application programming interface definition.

12
13 9. A method comprising:
14 receiving an indication of an interface definition, wherein the interface
15 definition includes a plurality of constructs;
16 transforming the interface definition into data for a first file; and
17 transforming the interface definition into data for a second file, wherein the
18 data for the first file is different than the data for the second file.

19
20 10. A method as recited in claim 9, wherein the first file and the second
21 file are each different ones of the following types of files: a component object
22 model (COM) header file, a mapping file to map enumeration values to
23 corresponding string values, a proxy object code file, and a documentation file.

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11. A method as recited in claim 9, further comprising:
determining that the interface definition has been changed;
re-transforming the interface definition into data for a third file, wherein the
third file is the same type of file as the first file; and
re-transforming the interface definition into data for a fourth file, wherein
the fourth file is the same type of file as the second file.

12. A method as recited in claim 11, wherein determining that the
interface definition has been changed comprises automatically detecting that the
interface definition has been changed.

13. One or more computer readable media having stored thereon a
plurality of instructions that, when executed by a transformation engine, causes the
transformation engine to:

access a plurality of constructs in an application programming interface
description, wherein the description is written in an extensible markup language
(XML) format; and

transform each of the plurality of constructs into code for a component
object module (COM) application programming interface header file.

14. One or more computer readable media as recited in claim 13,
wherein the transformation engine comprises a series of instructions executed by
one or more processors.

1 **20.** One or more computer readable media as recited in claim 13,
2 wherein the plurality of instructions include instructions to transform a declare
3 interface construct into a component object model forward class declaration.

4
5 **21.** One or more computer readable media as recited in claim 13,
6 wherein the plurality of instructions include instructions to transform a declare
7 data structure construct into a component object model data structure declaration.

8
9 **22.** One or more computer readable media as recited in claim 13,
10 wherein the plurality of instructions include instructions to transform a declare
11 macro construct into a component object model manifest constant.

12
13 **23.** A method comprising:
14 receiving an indication of an application programming interface
15 description, wherein the description is written in an extensible markup language
16 (XML) format;
17 identifying a plurality of constructs in the application programming
18 interface description; and
19 transforming each of the plurality of constructs into code for a component
20 object module (COM) application programming interface header file.

21
22 **24.** A method as recited in claim 23, wherein the code for the
23 component object module comprises C source code.

1 **25.** A method as recited in claim 23, wherein the code for the
2 component object module comprises C++ source code.

3
4 **26.** A method as recited in claim 23, wherein the transforming
5 comprises transforming a declare enumeration construct into a series of manifest
6 constants.

7
8 **27.** A method as recited in claim 23, wherein the transforming
9 comprises transforming a declare enumeration construct into a component object
10 model enumeration declaration.

11
12 **28.** A method as recited in claim 23, wherein the transforming
13 comprises transforming a declare function construct into a component object
14 model function declaration.

15
16 **29.** A method as recited in claim 23, wherein the transforming
17 comprises transforming a declare class object construct into a component object
18 model class object ID declaration.

19
20 **30.** A method as recited in claim 23, wherein the transforming
21 comprises transforming a declare interface construct into a component object
22 model forward class declaration.

1 **31.** A method as recited in claim 23, wherein the transforming
2 comprises transforming a declare data structure construct into a component object
3 model data structure declaration.

4
5 **32.** A method as recited in claim 23, wherein the transforming
6 comprises transforming a declare macro construct into a component object model
7 manifest constant.

8
9 **33.** One or more computer readable media having stored thereon a
10 plurality of instructions that, when applied by a transformation engine, causes the
11 transformation engine to perform acts comprising:

12 receiving an indication of an application programming interface
13 description, wherein the description is written in an extensible markup language
14 (XML) format;

15 identifying one or more enumeration declaration constructs in the
16 application programming interface description; and

17 transforming each of the enumeration declaration constructs into a mapping
18 of enumeration values to corresponding string values.

19
20 **34.** One or more computer readable media as recited in claim 33,
21 wherein the transformation engine comprises a series of instructions executed by
22 one or more processors.

1 35. One or more computer readable media having stored thereon a
2 plurality of instructions that, when applied by a transformation engine, causes the
3 transformation engine to perform acts comprising:

4 receiving an indication of an application programming interface
5 description, wherein the description is written in an extensible markup language
6 (XML) format;

7 identifying a plurality of constructs in the application programming
8 interface description; and

9 transforming each of the plurality of constructs into code for a test proxy
10 file to be used in testing a component object module (COM) application
11 programming interface header file generated from the application programming
12 interface description.

13
14 36. One or more computer readable media as recited in claim 35,
15 wherein the transformation engine comprises a series of instructions executed by
16 one or more processors.

17
18 37. One or more computer readable media as recited in claim 35,
19 wherein each of the plurality of constructs comprises a declare interface construct.

20
21 38. A computer-readable medium having stored thereon a data structure
22 comprising:

23 an id attribute field that contains data identifying an application
24 programming interface description construct;

1 a plurality of construct fields that contain data describing the application
2 programming interface; and

3 a field functioning to identify the end of the data structure.

4
5 **39.** A computer-readable medium as recited in claim 38, wherein the
6 plurality of construct fields include one or more declare enumeration construct
7 fields.

8
9 **40.** A computer readable media as recited in claim 39, wherein each
10 declare enumeration construct field includes:

11 a plurality of declare enumeration member constructs; and

12 an enumeration flag attribute that identifies whether the plurality of declare
13 enumeration member constructs are to be transformed into a series of manifest
14 constants or transformed into a component object model enumeration declaration.

15
16 **41.** A computer-readable medium as recited in claim 38, wherein the
17 plurality of construct fields include one or more declare function construct fields.

18
19 **42.** A computer-readable medium as recited in claim 38, wherein the
20 plurality of construct fields include one or more declare class object construct
21 fields.

22
23 **43.** A computer-readable medium as recited in claim 38, wherein the
24 plurality of construct fields include one or more declare interface construct fields.
25

1 **44.** A computer readable media as recited in claim 43, wherein each
2 declare interface construct field includes:

3 one or more declare method constructs, wherein each declare method
4 construct stores data identifying a method corresponding to the interface defined
5 by the declare interface construct field; and

6 wherein each declare method construct includes one or more declare
7 parameter construct fields, wherein each declare parameter construct field stores
8 data identifying a parameter of the method.

9
10 **45.** A computer-readable medium as recited in claim 38, wherein the
11 plurality of construct fields include one or more declare data structure construct
12 fields.

13
14 **46.** A computer-readable medium as recited in claim 38, wherein the
15 plurality of construct fields include one or more declare macro construct fields.